

SAPC 11436

Copy 1 of 7

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17 December 1956

MEMORANDUM FOR: Contracting Officer

SUBJECT : Requirements Interpretations - System Four

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1. This will confirm discussions with [ ] in which adjustment to certain parameters on the System were discussed. It is requested that these adjustments be made to the first production unit and if it can be done without slippage of delivery time, be made to the prototype:

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a. Antennas - Bands 8, 9 and 10 should gain 10 db. in sensitivity by reducing the 20° beam along the axis of the carrier to approximately 2°. In order to obtain space for this, the antennas for Band 2 can be degraded to the extent that Band 1 is now degraded.

b. Lock-on time - The contractor had changed the lock-on requirement from 0-30 seconds continuous to 5 or 30 seconds as a two step adjustment. We will accept the step adjustment; however, with lock-on times of  $\frac{1}{2}$  second, 5 seconds, 30 seconds and three minutes.

c. The AFC has been found to be unnecessary. In order to improve the dependability of the receiver materially, it should be eliminated.

d. It has been shown that the pulse stretcher of System Four (and System One also) is degrading the information collected. It should be eliminated.

e. As agreed in principle with [ ] on 15 November, a pulse stretching type of threshold (in order to get the enhanced signal to noise ratio of signals greater than noise) will be used to create a minimum lock-on sensitivity loss. This threshold control will be adjustable as a maintenance adjustment for lock-ons on noise at rates of once per second to once per hour. (It is believed that it will be set in normal operation at once per 10 seconds.)

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f. The programming circuitry must not allow one receiver to take over the camera permanently through a constant lock-on such

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SUBJECT: Requirements Interpretations - System Four

as any of the six receivers above 10 kmc/s can now do. They have enough weighted control already in that they are six receivers in a total of fourteen and should have no further advantage. All receivers will be programmed alike in their use of the camera. This will greatly simplify the programmer.

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ELINT Staff Officer

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*Rec'd  
12/27/56  
Contract*

*Copy [redacted] to show signature  
as "RALPH" only*

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2	Dep. Proj. Director		gpd	18 Feb 57	
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4	OPS -			25X1	
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<p>Remarks:</p> <p>Copy of attached memo sent to R-W on 12/28/56</p> <p>(SAPC-11564 fr. RMB dated 23 Jan. relates to this)</p>					
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